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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/531,996	03/20/2000	Mark J. Miller	17018-12.10US	6353
20350	7590	12/13/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834			ODOM, CURTIS B	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/531,996

Applicant(s)

MILLER ET AL.

Examiner

Curtis B. Odom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 11/16/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 75-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 75, 77 and 79 is/are rejected.
- 7) ☒ Claim(s) 76 and 78 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The affidavit filed on 11/126/2005 under 37 CFR 1.131 is sufficient to overcome the Kondo reference.

### ***Claim Objections***

2. Claims 75 and 76 are objected to because of the following informalities: In claim 75, line 6, "the data signal" is suggested to be changed to "the digital signal". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U. S. Patent No. 6, 037, 835) in view of Esmailzadeh et al. (U. S. Patent No. 6, 163, 533).

Regarding claim 75, Smith et al. discloses in a system for providing multiple access over a single communication channel (column 1, lines 36-45), a receiver comprising:

a digital signal (column 3, lines 52-56) representing a received data burst;

a data bus (Fig. 1, modulation information waveform path), the digital signal being fed to the data bus;

a control bus (Fig. 1, preamble path);

a preamble detection component coupled to the control bus, the digital signal further being fed to the preamble detection component, the preamble detection component configured to detect preambles using a given bit pattern;

plural demodulation circuits (Fig. 1, blocks 110-112, column 4, lines 44-67), each coupled to the data bus and to the control bus, each configured to produce a data stream from data received over the data bus; and

a selection component (Fig. 1, block 108, column 4, lines 44-67) operatively coupled to the preamble detection component and coupled to the control bus, the selection component configured to select an available demodulation circuit,

wherein one of the demodulation circuits operates on data in response to control signals issued by the preamble detection component and by the selection component (column 4, lines 44-67), so that multiple data bursts received by the preamble detection component can be processed by selected ones on the demodulation circuits (column 4, lines 44-67).

Smith et al. does not disclose the preambles are detected using a spreading code or multiple data bursts received by the preamble detection component are processed **concurrently** by selected ones on the demodulation circuits.

However, Smith et al. does disclose that the plural demodulators includes a demodulator dedicated to a particular type of modulation (column 4, lines 61-67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made that in a multi-user system (column 1, lines 36-45) that each demodulator could have been dedicated to demodulating a different type of signal from each user. Thus, it would have been obvious that since Smith et al. has the capacity of demodulate signals concurrently, that demodulating each user signal independently and concurrently would increase the processing speed of the device of Smith et al. Thus, claim 75 does not constitute patentability based on concurrent demodulation.

Smith et al. also discloses detecting the preamble by correlating the preamble with a given bit pattern (column 4, lines 3-27). Esmailzadeh et al. discloses this given bit pattern used to detect the preamble can be a spreading code (column 2, lines 36-65). Therefore, it would have been obvious to one skilled in the art at the time the invention was made that if the preamble were modulated with a spreading code that it would have to be detected using a spreading code. Spreading codes allow signals to take advantage of spread spectrum modulation, wherein spread spectrum modulation allows signals reduce interference and increased resistance to fading. Thus, modulating and detecting a preamble using spreading code does not constitute patentability.

5. Claims 77 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U. S. Patent No. 6, 037, 835) in view of Esmailzadeh et al. (U. S. Patent No. 6, 163, 533) in further view of Abramson (U. S. Patent No. 5, 537, 397).

Regarding claim 77, Smith et al. discloses in a system for providing multiple access over a single communication channel (column 1, lines 36-45), a receiver comprising:

a digital signal (column 3, lines 52-56) representing a received data burst;

a data bus (Fig. 1, modulation information waveform path), the digital signal being fed to the data bus;

a control bus (Fig. 1, preamble path);

a preamble detection component coupled to the control bus, the digital signal further being fed to the preamble detection component, the preamble detection component configured to detect preambles using a given bit pattern;

plural demodulation circuits (Fig. 1, blocks 110-112, column 4, lines 44-67), each coupled to the data bus and to the control bus, each configured to produce a data stream from data received over the data bus; and

a selection component (Fig. 1, block 108, column 4, lines 44-67) operatively coupled to the preamble detection component and coupled to the control bus, the selection component configured to select an available demodulation circuit,

wherein one of the demodulation circuits operates on data in response to control signals issued by the preamble detection component and by the selection component (column 4, lines 44-67), so that multiple data bursts received by the preamble detection component can be processed by selected ones on the demodulation circuits (column 4, lines 44-67).

Smith et al. does not disclose an analog to digital converter to provide a digital signal comprising a plurality of signal components, the signal components being transmitted by a plurality of transmitters, each transmitter using a first spreading code to produce its signal component, the same first spreading code being used by each of the transmitters; the preambles

are detected using a spreading code or multiple data bursts received by the preamble detection component are processed **concurrently** by selected ones on the demodulation circuits.

However, Smith does disclose that the signal provided to the preamble detection component is a digital signal (column 4, lines 13-28). Therefore, it would have been obvious to one of ordinary skill in the art that if an analog signal were received that the receiver (Fig. 1) would have to convert the analog signal to a digital signal in order for the preamble detection component to detect the preamble. Thus, converting a signal from analog signal to digital signal does not constitute patentability.

Smith et al. also discloses that the plural demodulators includes a demodulator dedicated to a particular type of modulation (column 4, lines 61-67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made that in a multi-user system (column 1, lines 36-45) that each demodulator could have been dedicated to demodulating a different type of signal from each user. Thus, it would have been obvious that since Smith et al. has the capacity of demodulate signals concurrently, that demodulating each user signal independently and concurrently would increase the processing speed of the device of Smith et al. Thus, claim 75 does not constitute patentability based on concurrent demodulation.

Smith et al. also discloses detecting the preamble by correlating the preamble with a given bit pattern (column 4, lines 3-27). Esmailzadeh et al. discloses this given bit pattern used to detect the preamble can be a spreading code (column 2, lines 36-65). Therefore, it would have been obvious to one skilled in the art at the time the invention was made that if the preamble were modulated with a spreading code that it would have to be detected using a spreading code. Spreading codes allow signals to take advantage of spread spectrum modulation, wherein spread

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spectrum modulation allows signals reduced interference and increased resistance to fading.

Thus, modulating and detecting a preamble using spreading code does not constitute patentability.

Smith also discloses that the signal components could be transmitted by a plurality of users (column 1, lines 36-45). Therefore, it would have been obvious to one skilled in the art to implement the receiver of Smith et al. and Esmailzadeh et al. in a multi-user spread spectrum environment to allow signals reduced interference and increased resistance to fading involved with spread spectrum modulation. Abramson discloses a multi-user spread spectrum environment wherein multiple transmitters (users) use the same spreading code to transmit data (Abstract, column 5, lines 3-35). Therefore, it would have also been obvious to one skilled in the art at the time the invention was made to implement the receiver of Smith et al. and Esmailzadeh et al. in a spread spectrum environment as taught by Abramson (where each user uses the same spreading code) since Abramson states that when users use the same spreading code there is reduced complexity in the system as compared to systems using multiple spreading codes (column 5, lines 3-35).

Regarding claim 79, the claimed device includes features corresponding to subject matter in the above rejection of claim 77 which is applicable hereto.



*Allowable Subject Matter*

6. Claims 76 and 78 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Esmailzadeh (U. S. Patent No. 6, 259, 724) discloses a preamble detection component including plural demodulators coupled to the preamble detection.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom  
December 6, 2005



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINE**  
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